

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

1. (previously presented) The storage system according to claim 15, wherein at least one of said physical storage devices is a Fiber Channel (FC) storage device having a FC interface, and at least another one of said physical storage devices is a Serial Advanced Technology Attachment (SATA) storage device having a serial interface,

wherein said storage device pack having a SATA storage device also includes a FC/SATA converter, and

wherein the power conversion circuit, being included in said storage device pack having said SATA storage device, is coupled to said SATA storage device and the FC/SATA converter for supplying power to said SATA storage device and the FC/SATA converter.

2. (previously presented) The storage system according to Claim 1, wherein said first power conversion circuit supplies power to said physical storage device via a single power supply line.

3. (previously presented) The storage system according to Claim 1, wherein said power supply circuit is a AC/DC power supply, said power conversion circuit is a DC/DC converter, and said first types of power is higher than said single types of power.

4. (previously presented) The storage system according to Claim 1, wherein said physical storage devices incorporate internal voltage conversion circuits which convert power supplied by said power conversion circuit and having a single voltage value into a plurality of voltage values.

5. (previously presented) The storage system according to Claim 4, wherein power having one of the plurality of voltage values converted by said internal voltage conversion circuits is used to drive magnetic storage media of said physical storage devices, and power having another of said plurality of voltage values is used to drive interface logic circuits of said physical storage devices.

6. (previously presented) The storage system according to Claim 1, wherein said power conversion circuit receives power having said first voltage value, and outputs power having said single voltage value.

7. (previously presented) The storage system according to Claim 1, wherein any of said plurality of storage device packs is a first storage device pack having a first power conversion circuit which receives power having a first voltage value from said power supply circuit, converts said first voltage value into a second voltage value different from said first voltage value, and supplies power having a single voltage value to said physical storage device, and

wherein any of the other of said plurality of storage device packs is a second storage device pack having a second power conversion circuit which

receives power having the first voltage value from said power supply circuit, converts said first voltage value into a second voltage value different from said first voltage value, and supplies power having a plurality of different voltage values to said physical storage device.

8. (previously presented) The storage system according to Claim 1, wherein a motherboard is positioned between said power supply circuit and said storage device pack, and said first power conversion circuit is connected, via said motherboard, to a power supply line connecting said physical storage devices.

Claims 9 and 10 (canceled).

11. (previously presented) The storage system according to claim 15, wherein the voltage level of said single type of power from said main power supply line is equal to or higher than the highest voltage level of said one or more types of power required by said physical storage device,

wherein at least one of said physical storage devices included in said storage device packs is a Fiber Channel (FC) storage device having a FC interface, and at least another one of said physical storage devices is a Serial Advanced Technology Attachment (SATA) storage device having a serial interface,

wherein said storage device pack having a SATA storage device also includes a FC/SATA converter, and

wherein the power conversion circuit, being included in said storage device pack having said SATA storage device, is coupled to said SATA storage device and the FC/SATA converter for supplying power to said SATA storage device and the FC/SATA converter.

Claims 12-14 (canceled).

15. (previously presented) A storage system comprising:
- a power supply circuit which outputs a single type of power having a single voltage level;
 - a main body having a main power supply line to transmit said single type of power output from said power supply circuit, a data transfer path for data transfer, and a plurality of pack connection sites; and
 - a plurality of storage device packs which can receive said single type of power from said main power supply line, which are each connected to said plurality of pack connection sites on said main body so as to enable exchange of data with said data transfer path, and which can be removed from said pack connection sites,
- wherein each storage device pack comprises:
- a physical storage device requiring the supply of one or more types of power each having a prescribed voltage level, and
 - a power conversion circuit which receives said single type of power from said main power supply line, converts said single type of power into said one or more types of power required by said physical storage device units,

and outputs said converted one or more types of power to said physical storage device,

wherein the voltage level of said single type of power from said main power supply line is equal to or higher than the highest voltage level of said one or more types of power required by said physical storage device,

wherein each of said plurality of pack connection sites on said main body comprises:

a U-turn power supply line to receive, and once again input to said storage device pack, said one or more types of power output from said power conversion circuit within said storage device pack,

wherein said plurality of storage device packs comprises at least one power-returning type storage device pack,

wherein said power-returning type storage device pack further has a return power supply line to return said one or more types of power output from said power conversion circuit to said U-turn power supply line, and

an input power supply line to input, to said physical storage device, said one or more types of power which are again input from said U-turn power supply line, and

wherein said power-returning type storage device pack can be connected to any of said plurality of pack connection sites on said main body.

16. (previously presented) The storage system according to Claim 15, wherein said power-returning type storage device pack comprises:

a canister which accommodates said physical storage device and said power conversion circuit;

a main connector provided in the outer face of said canister and having a power supply terminal functioning as said input power supply line and a data transfer terminal for connection of said data transfer path to said physical storage device; and

an auxiliary connector provided in the outer face of said canister and having a main power supply terminal to connect said main power supply line to said power conversion circuit, and a return power supply terminal to connect said return power supply line to said U-turn power supply line, and

wherein said physical storage device is positioned within said canister in proximity to said main connector, and is directly connected to said main connector.

Claim 17 (canceled).

18. (previously presented) The storage system according to Claim 11, further comprising:

a power supply control circuit which individually controls the turning-on and turning-off of said power conversion circuits included in said plurality of storage device packs.

19. (previously presented) The storage system according to Claim 11, further comprising:

a power supply control circuit which individually controls the output voltage levels of said power conversion circuits included in said plurality of storage device packs, according to the power supply voltage levels required

by each of said physical storage devices within said plurality of storage device packs.

Claims 20-31 (canceled).